

Remarks

This Application has been carefully reviewed in light of the Office Action mailed August 14, 2002. At the time of the Office Action, Claims 1-24 were pending in this patent application. The Examiner rejected Claims 1-24. Applicants believe all previously pending claims are allowable over the prior art of record. However, to advance this case expeditiously to issuance, Claims 1, 9 and 17 have been amended. Applicants respectfully request reconsideration and favorable action in this case in light of the comments below.

Objections to the Drawings

The Examiner objects to the drawings under 37 C.F.R. § 1.84(p)(5) because they do not include reference character 50 contained in the description. Applicants respectfully submit a proposed drawing correction which includes reference character 50 in Figure 2 and reference character 52 in Figure 1. Applicants have also amended the specification to further clarify a reference to port groups 50. Therefore, Applicants respectfully request that the Examiner's objection to the drawings be withdrawn.

Section 103 Rejections

The Examiner rejects claims 1-24 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,483,522 issued to Derby et al. ("*Derby*"). Applicants appreciate the Examiner's consideration of the application. Applicants, however, respectfully submit that the combination fails to disclose, teach, or suggest the limitations recited in Applicants' claims, and that there is no required motivation to combine *Derby* with the contended knowledge of one skilled in the art.

Amended Claim 1 of the present application recites:

A method for providing an internal topology of a node within a network, comprising:

determining asymmetric connections between traffic bearing components in a network node;

determining an intranode connectivity between the traffic bearing components based on the asymmetric connections;

distributing a model of the node indicative of the intranode connectivity to a disparate node in a network with the node; and

using the model at the disparate node in determining a routing path through the network.

The Examiner states that *Derby* discloses "determining intranode connectivity between traffic bearing components in a network node." *See* Office Action, ¶ 2. However, amended Claim 1 includes distributing a model of the node to other nodes based on the asymmetric connections. "Based on the asymmetric connections" refers to the asymmetric connections determined between traffic bearing components in a network node in a previous element of Claim 1. The Examiner has not cited, nor does *Derby* disclose, teach or suggest, determining intranode connectivity between traffic bearing components in a network node based on asymmetric connections determined between traffic bearing components in a network node.

For at least these reasons, Applicants respectfully submit that Claim 1 is patentable over the cited art and request that the rejection of Claim 1 be withdrawn.

Moreover, there is no required motivation to combine *Derby* with the suggested knowledge of one skilled in the art as contended by the Examiner. According to the Examiner, *Derby* does not disclose the connections between the traffic bearing components as asymmetric. *See* Office Action, ¶ 2. The Examiner states that "[o]ne skilled in the art would recognize that bidirectional connections are often asymmetric in order to accommodate a larger capacity in one direction. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have asymmetric connections between traffic bearing components in the invention of *Derby* as a matter of design choice." *Id.* Applicants respectfully disagree. For the following reasons, Applicants respectfully submit that it would not have been obvious to one skilled in the art at the time of the invention to combine the teachings of *Derby* with the suggested knowledge of one skilled in the art as contended by the Examiner.

The Examiner has not cited language in any reference or within information commonly known to those skilled in the art that provides the necessary motivation or suggestion to combine the references. In order to rely on a combination of prior art

references, there must be some teaching, suggestion, or motivation to combine the reference. *See In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987). Simply stating the standard of obviousness is not sufficient to establish the required motivation to combine the references. *See In re Denis Rouffet*, 1998 WL 400169 (Fed. Cir.). Instead, the Examiner must explain the "specific understanding or principle within the knowledge of the skilled artisan that would motivate... the combination." *Id.* The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990); M.P.E.P. § 2143.01. "Combining prior art references without the required evidence of a suggestion or motivation simply makes the Applicants' disclosure a blueprint for piecing together the prior art to defeat patentability, the essence of hindsight. Federal Circuit case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the suggestion or motivation to combine prior art references." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 48 USPQ.2d 1225, 1232 (Fed. Cir. 1998); *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983). The Examiner must identify specifically the reasons one of ordinary skill in the art would have been motivated to select the references and combine them.¹ Although evidence of suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, the range of sources available does not diminish the requirement for actual evidence. The Federal Circuit has confirmed that conclusory "it would have been obvious" statements are not evidence.² Thus, the Examiner's suggestion that it would have been obvious to combine these references "as a matter of design choice" does not constitute evidence.³ If the Examiner

¹ The showing must be clear and particular. *See, e.g., C.R. Bard*, 48 USPQ.2d at 1232. Where the Examiner does not explain the "specific understanding or principle within the knowledge of a skilled artisan" that would motivate one with no knowledge of the applicant's claimed invention to make the combination, the Federal Circuit infers that the Examiner selected the references with the assistance of hindsight. *In re Rouffet*, 149 F.3d 1350, 1358 (Fed. Cir. 1998).

² Conclusory statements by the Examiner regarding the teaching of multiple references standing alone, are not "evidence." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999).

³ If the Examiner is relying on "common knowledge" or "well known" art in support of his rationale for combining the references, the Examiner is requested to produce a reference in support of his position pursuant to M.P.E.P. § 2144.03. If the Examiner is relying on personal knowledge to supply the required motivation or

is relying on "common knowledge" or "well known" art in support of his rationale for combining the references, the Examiner is requested to produce a reference in support of his position pursuant to M.P.E.P. § 2144.03. If the Examiner is relying on personal knowledge to supply the required motivation or suggestion to combine, Applicants respectfully request that the Examiner produce an affidavit supporting such facts pursuant to M.P.E.P. § 2144.03.

For at least these reasons, Applicants respectfully submit that Claim 1 is patentable over the cited art and request that the rejection of Claim 1 be withdrawn.

Claims 2-8 each depend from independent Claim 1. Therefore, Applicants respectfully submit that Claims 2-8 are patentable over the cited art, for example, for the same reasons discussed above with regard to Claim 1 and request that the rejection of Claims 2-8 be withdrawn.

Moreover, Claim 5 includes distributing the model using opaque link state advertisements (LSAs). The Examiner has not cited any portion of the prior art which discloses, teaches or suggests these elements. Thus, Applicants further submit that Claim 5 is patentable over the cited art and request that the rejection of Claim 5 be withdrawn.

Furthermore, Claim 7 includes "determining internode connectivity between the traffic bearing components by assigning weights to the asymmetric connections based on their speed;" and Claim 8 includes "assigning a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections" and "utilizing open shortest path first on the weighted connections at the disparate node to determine the routing path through the network." To suggest anticipation, the Examiner states that:

One skilled in the art would recognize that weights are typically assigned to intermediate connections based on availability, reliability, congestion, distance, etc., in order to properly determine an optimal route or best path from a source to a destination involving the connections. Therefore, it would

suggestion to combine, Applicants respectfully request that the Examiner produce an affidavit supporting such facts pursuant to M.P.E.P. § 2144.03.

have been obvious to one skilled in the art at the time the invention was made to assign appropriate weights to the connections in the invention of *Derby*.

Office Action, ¶ 6. However, in rejecting Claims 7 and 8 with such a broad, conclusory statement, the Examiner disregards the requirement of finding support for all elements of Claims 7 and 8 as required. For example, the Examiner cites no support for "assigning a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections." Moreover, as discussed above with regard to Claim 1, the Examiner has made another conclusory "it would be obvious" statement without explaining the specific understanding or principle within the knowledge of the skilled artisan that would motivate the combination as required. Thus, Applicants further submit that Claims 7 and 8 are patentable over the cited art and request that the rejection of Claims 7 and 8 be withdrawn.

Claim 9 includes means for determining an intranode connectivity between the traffic bearing components based on the asymmetric connections. For the reasons discussed above with regard to Claim 1, the Examiner has not cited any portion of *Derby*, nor does *Derby* disclose, teach or suggest these elements. Furthermore, as discussed above with regard to Claim 1, there is no required motivation to combine *Derby* with the suggested knowledge of one skilled in the art as contended by the Examiner.

For at least these reasons, Applicants respectfully submit that Claim 9 is patentable over the cited art and request that the rejection of Claim 9 be withdrawn.

Claims 10-16 each depend from independent Claim 9. Therefore, Applicants respectfully submit that Claims 10-16 are patentable over the cited art, for example, for the same reasons discussed above with regard to Claim 9 and request that the rejection of Claims 10-16 be withdrawn.

Moreover, Claim 13 includes means for distributing the model using opaque link state advertisements (LSAs). The Examiner has not cited any portion of the prior art which discloses, teaches or suggests these elements. Thus, Applicants further submit that Claim 13 is patentable over the cited art and request that the rejection of Claim 13 be withdrawn.

Furthermore, Claim 15 includes "means for determining internode connectivity between the traffic bearing components by assigning weights to the asymmetric connections based on their speed;" and Claim 16 includes "means for assigning a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections" and "means for utilizing open shortest path first on the weighted connections at the disparate node to determine the routing path through the network." As discussed above with regard to Claims 7 and 8, the Examiner fails to cite support for all claim elements and fails to explain the specific understanding or principle within the knowledge of the skilled artisan that would motivate the combination as required. Thus, Applicants further submit that Claims 15 and 16 are patentable over the cited art and request that the rejection of Claims 15 and 16 be withdrawn.

Claim 17 includes logic encoded in media operable to determine an intranode connectivity between the traffic bearing components based on the asymmetric connections. For the reasons discussed above with regard to Claim 1, the Examiner has not cited any portion of *Derby*, nor does *Derby* disclose, teach or suggest these elements. Furthermore, as discussed above with regard to Claim 1, there is no required motivation to combine *Derby* with the suggested knowledge of one skilled in the art as contended by the Examiner.

For at least these reasons, Applicants respectfully submit that Claim 17 is patentable over the cited art and request that the rejection of Claim 17 be withdrawn.

Claims 18-24 each depend from independent Claim 17. Therefore, Applicants respectfully submit that Claims 18-24 are patentable over the cited art, for example, for the same reasons discussed above with regard to Claim 17 and request that the rejection of Claims 18-24 be withdrawn.

Moreover, Claim 21 includes logic further operable to distribute the model using opaque link state advertisements (LSAs). The Examiner has not cited any portion of the prior art which discloses, teaches or suggests these elements. Thus, Applicants further submit that

Claim 21 is patentable over the cited art and request that the rejection of Claim 21 be withdrawn.

Furthermore, Claim 23 includes "logic further operable to determine internode connectivity between the traffic bearing components by assigning weights to the asymmetric connections based on their speed;" and Claim 24 includes "logic further operable to assign a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections and to utilize open shortest path first on the weighted connections at the disparate node to determine the routing path through the network." As discussed above with regard to Claims 7 and 8, the Examiner fails to cite support for all claim elements and fails to explain the specific understanding or principle within the knowledge of the skilled artisan that would motivate the combination as required. Thus, Applicants further submit that Claims 23 and 24 are patentable over the cited art and request that the rejection of Claims 23 and 24 be withdrawn.

Conclusions

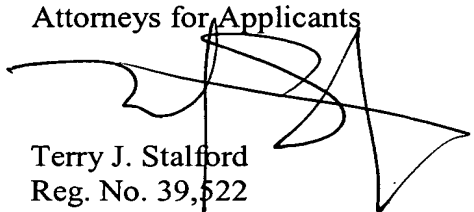
Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending claims. If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

No fee is believed to be due. However, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.
Attorneys for Applicants

Terry J. Stalford
Reg. No. 39,522



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CORRESPONDENCE ADDRESS:
2001 Ross Avenue, Suite 600
Dallas, Texas 75201-2980
(214) 953-6477

MARKED-UP VERSION REFLECTING CHANGES

In the Specification

In the paragraph beginning on page 11, line 27:

FIGURE 2 illustrates details of the transport router 60 in accordance with one embodiment of the present invention. In this embodiment, the transport router 60 comprises a simple port group 50 and acts as a single network element within a customer's autonomous network.

Claims

For the convenience of the Examiner, all claims have been listed whether or not an amendment has been made.

1. **(Amended)** A method for providing an internal topology of a node within a network, comprising:

 determining asymmetric connections between traffic bearing components in a network node;

 determining an intranode connectivity between the traffic bearing components based on the **asymmetric** connections;

 distributing a model of the node indicative of the intranode connectivity to a disparate node in a network with the node; and

 using the model at the disparate node in determining a routing path through the network.

2. The method of Claim 1, wherein the traffic bearing components comprise receiver transmitter pairs (RTPs).

3. The method of Claim 1, wherein the traffic bearing components comprise receiver transmitter pairs (RTPs) and lower speed interfaces to external nodes coupled to the network.

4. The method of Claim 1, further comprising determining all possible internode connectivity between the traffic bearing components based on the asymmetric connections.

5. The method of Claim 1, further comprising distributing the model using opaque link state advertisements (LSAs).

6. The method of Claim 1, wherein the network comprises a private network.

7. The method of Claim 1, further comprising determining internode connectivity between the traffic bearing components by assigning weights to the asymmetric connections based on their speed.

8. The method of Claim 1, further comprising:
assigning a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections; and
utilizing open shortest path first on the weighted connections at the disparate node to determine the routing path through the network.

9. **(Amended)** A system for providing an internal topology of a node within a network, comprising:

means for determining asymmetric connections between traffic bearing components in a network node;

means for determining an intranode connectivity between the traffic bearing components based on the asymmetric connections;

means for distributing a model of the node indicative of the intranode connectivity to a disparate node in a network with the node; and

means for using the model at the disparate node in determining a routing path through the network.

10. The system of Claim 9, wherein the traffic bearing components comprise receiver transmitter pairs (RTPs).

11. The system of Claim 9, wherein the traffic bearing components comprise receiver transmitter pairs (RTPs) and lower speed interfaces to external nodes coupled to the network.

12. The system of Claim 9, further comprising means for determining all possible internode connectivity between the traffic bearing components based on the asymmetric connections.

13. The system of Claim 9, further comprising means for distributing the model using opaque link state advertisements (LSAs).

14. The system of Claim 9, wherein the network comprises a private network.

15. The system of Claim 9, further comprising means for determining internode connectivity between the traffic bearing components by assigning weights to the asymmetric connections based on their speed.

16. The system of Claim 9, further comprising:
- means for assigning a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections; and
 - means for utilizing open shortest path first on the weighted connections at the disparate node to determine the routing path through the network.

17. **(Amended)** A system for providing an internal topology of a node within a network, comprising:

logic encoded in media; and

the logic operable to determine asymmetric connections between traffic bearing components in a network node, to determine an intranode connectivity between the traffic bearing components based on the asymmetric connections, to distribute a model of the node indicative of the intranode connectivity to a disparate node in a network with the node and to use the model at the disparate node in determining a routing path through the network.

18. The system of Claim 17, wherein the traffic bearing components comprise receiver transmitter pairs (RTPs).

19. The system of Claim 17, wherein the traffic bearing components comprise receiver transmitter pairs (RTPs) and lower speed interfaces to external nodes coupled to the network.

20. The system of Claim 17, the logic further operable to determine all possible internode connectivity between the traffic bearing components based on the asymmetric connections.

21. The system of Claim 17, the logic further operable to distribute the model using opaque link state advertisements (LSAs).

22. The system of Claim 17, wherein the network comprises a private network.

23. The system of Claim 17, the logic further operable to determine internode connectivity between the traffic bearing components by assigning weights to the asymmetric connections based on their speed.

24. The system of Claim 17, the logic further operable to assign a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections and to utilize open shortest path first on the weighted connections at the disparate node to determine the routing path through the network.